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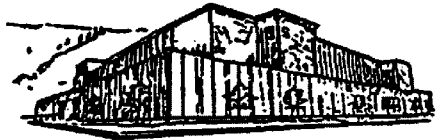
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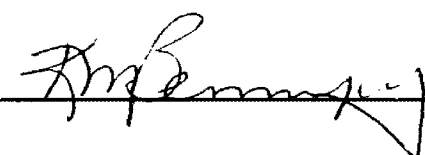
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**RISK ASSESSMENT INSTRUMENTS:
CAN WE PREDICT RECIDIVISM?
(A Review of the Research)**

by

Kristina M. Besseney

B.A. University of Montana, 1990

presented in partial fulfillment of the requirements

for the degree of

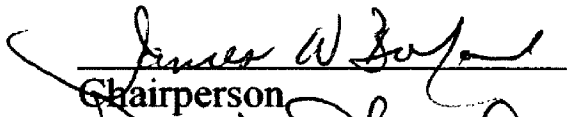
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**Risk Assessment Instruments: Can We Predict Recidivism?
(A Review of the Research)**

Committee Chairperson: Dr. Jim Burfeind 

Classification of offenders and prediction of risk has become an important component of criminal justice policy. Decreasing budgets, lack of resources and personnel, and changes in sentencing philosophy have called for more systematic and objective methods of processing offenders. However, classification models and risk assessment instruments need to take into consideration the ethical, legal and methodological concerns in order to be effective.

While there are numerous risk assessment instruments currently in use, this paper highlights two early ones, the Salient Factor Score (SFS) and the Statistical Information on Recidivism (SIR), and two more recently developed ones, the Wisconsin Case Classification/Staff Deployment Project and the Level of Supervision Inventory (LSI). Both the SFS and the SIR are examples of instruments that incorporate primarily static risk factors, those that are unchangeable, such as age and criminal history. On the other hand, the Wisconsin Instrument and the LSI are instruments that include not only static risk factors, but also measure dynamic risk factors, that are amenable to change and therefore should be targets for treatment.

Problems involved in the use of risk assessment instruments include the transferability of instruments from one population to another, their stability over time, and their use on specific subsamples of offenders, such as females or Native Americans. Future research should continue to test the efficacy of risk assessment instruments, with special attention to female populations and the use of risk assessment in rural communities.

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TABLE OF CONTENTS

I.	Introduction.....	1
II.	Classification and Prediction.....	3
III.	Issues in Prediction.....	8
	A. Ethical Concerns.....	8
	B. Legal Considerations.....	9
	C. Methodological Issues.....	11
	1. The Predictors	
	2. The Criterion	
	3. The Sample	
	4. The Base Rate	
	5. The Method of Analysis	
IV.	Risk Assessment Instruments.....	18
	A. Salient Factor Score.....	18
	B. Statistical Information on Recidivism.....	22
	C. Dynamic Risk Factors.....	24
	D. Wisconsin Instrument.....	25
	E. Level of Supervision Inventory.....	30
V.	Transferability of Risk Assessment Instruments.....	38
VI.	Summary and Conclusions.....	50
VII.	References.....	54
VIII.	Appendices.....	63

INTRODUCTION

According to Bureau of Justice Statistics (2000), in 1999 there were 6.3 million people on probation or parole, in jail or in prison. This figure represents an average annual increase of 5.8 percent since 1990. As a result of increasing budgetary constraints and public pressure over crime rates, criminal justice officials have sought out new ways to deal with offenders more effectively.

One of the most important correctional tools developed in recent decades is the risk assessment instrument. Since its introduction approximately 25 years ago, the practice of risk assessment has been applied to numerous areas of correctional service, from prison to probation, in adult and juvenile institutions (Jones 1996). In making it possible to identify the risk an offender presents for further criminal behavior, risk classification allows for more appropriate supervision of offenders and better allocation of resources. Over the 25-year history of risk assessment, there have been numerous methodological changes that have improved the accuracy and applicability of risk classification systems. The early risk assessment models were developed for adult males. Now classification systems are available for juveniles and are being tested on female offenders. Initially, the purpose of risk assessment instruments was simply to classify offenders for different levels of security. Today, these instruments are being used to facilitate treatment as well as for custody purposes. Agencies are also progressing in understanding how best to apply assessment instruments and what is needed for optimal effectiveness.

The information presented here addresses the purposes of classification and prediction, and the legal, ethical, and methodological issues involved in the use of

prediction devices. Several different risk assessment instruments will be described, from the early ones to the most current, addressing their strengths and weaknesses as these have been presented in current research.

CLASSIFICATION AND PREDICTION

Classification and prediction are an essential part of the criminal justice decision process, influencing both general criminal justice policies and decisions regarding individuals. Classification refers to the “arrangement or division of entities into groups according to some system or principle, or to the placement of entities into groups according to rules already determined” (Gottfredson 1987:1). The aim of classification is to develop groups of individuals who are similar to one another based on certain characteristics, and who differ from individuals of other groups. This is similar to the statistical concept of minimizing in-group variation and maximizing between group variation (Gottfredson 1987). Classification in the criminal justice system can “make handling large numbers of offenders more efficient through a grouping process based on needs and problems. From an administrative standpoint, classification systems can provide for more orderly processing and handling of individuals. From a financial standpoint, classification schemes can enable administrators to make more efficient use of limited resources and to avoid providing resources for offenders who do not require them” (Megargee and Bohn 1979:21). Prediction is the assessment of some expected future behavior by a person. It is generally based on some previously observed relationships between two or more events. Prediction is central to criminal justice policy in that “if one seeks to control crime behavior, one needs first to be able to predict it” (Gottfredson 1987:6).

Prediction and classification occur at all stages of the criminal justice process: the police officer that patrols certain neighborhoods predicts that crime is more likely to occur there; pretrial release and bail decisions are often based on scoring systems that try

to predict who will abscond; classification schemes are used in sentencing guidelines in order to make explicit the basis for court penalties and reduce disparities in punishment; within custodial facilities, inmates are classified according to the level of security they require, in order to assure that the use of low-security facilities are maximized and high-security facilities are not overcrowded; prediction instruments are used as parole guidelines and for risk classification for probation and parole supervision (Glaser 1987). Prediction scores have also been used in research that evaluates the effects of different penal treatments (Farrington and Tarlington 1985). The entire foundation of the goals of the criminal justice system--the goals of rehabilitation, deterrence and incapacitation--requires prediction. Rehabilitation requires prediction in that "we assume that offenders may be changed so that the probability of reoffending is reduced" (Gottfredson 1987:2). Specific deterrence predicts that offenders who are punished will be deterred from recidivating and general deterrence predicts that punishment of offenders will prevent others from offending. Incapacitation predicts that crime will be reduced if offenders are incarcerated and therefore not available to commit other offenses.

Risk prediction studies have existed for a long time. In 1928, Ernest Burgess conducted a study of over 3,000 parolees and found 21 factors that differentiated parole successes from parole failures. This study, "Factors Making For Success or Failure on Parole," provides the origins of efforts to systematically develop an objective risk assessment tool. The past several decades, though, have seen a marked increase in the interest in these types of studies. In *Risk Prediction in Criminal Justice*, Peter Jones (1996) identifies three interrelated trends for this increased interest. First, there is the need for criminal justice agencies to adjust shrinking budgets to meet the increasing

needs for service. Prison overcrowding and the need for intermediate sanctions require that better techniques be developed to identify serious and persistent offenders. Second, recent research in the study of career criminals has shown that a large proportion of the crime rate can be attributed to a small number of offenders. It is these offenders that must be identified and targeted in order to reduce the crime rate. Third, there has been a shift in sentencing philosophy, moving toward reducing disparity in decision making and increasing appropriateness in punishment. It is " ... the model of just deserts today in most of the United States and the quest for uniformity, fairness and equality in sentencing" that has led to the increasing popularity of statistical prediction instruments (Hassin 1986:272).

Historically, risk assessments of offenders were contingent upon the professional judgement of corrections personnel, who gathered data and made subjective, clinical assessments. Assumptions were made about what characteristics appeared to be related to criminal behavior, and based on the extent to which an offender exhibited these characteristics, an assessment of his risk of recidivism was made. However, these assessments were susceptible to numerous biases, including the assessor's professional and personal experiences, theoretical perspective, and level of rapport with the offender (Klebe et al., 1999). Moreover, clinical prediction tends to pay insufficient attention to known facts about the population about which the prediction is being made (Hassin 1986). As a result of these biases, clinical assessments are problematic to uphold legally. Objective classification based on risk assessment instruments allows corrections systems to treat offenders differently but to do so systematically (Clear 1995). Rather than having disparity in sentencing caused by biases, classification justifies disparity based on the

information that dictates differential treatment. This is the rationale behind selective incapacitation, as opposed to collective incapacitation. Collective incapacitation, "in its purest form, requires that all offenders convicted of the same crime serve the same sentence" (Klein and Caggiano 1986:2). On the other hand, selective incapacitation considers numerous variables other than the past crime and attempts to determine the likelihood of future criminality. Based on this assessment, a determination is made about the level of incapacitation required by a particular offender. This, then, is the foundation of actuarial risk assessment devices—the ability to make objective determinations regarding offender supervision levels based in clearly identifiable criteria. While proponents of clinical assessments argue that actuarial methods are antihumanistic and mechanistic, others feel that "... with the exception of situations where reliable predictive data are lacking, there is simply no justification whatsoever for the continued use of the clinical model of assessment considering what is at stake (i.e., protecting the public)" (Gendreau et. al. 1999:65). In the development of the Statistical Information about Recidivism (SIR), an actuarial scale used in Canada, Joan Nuffield (1989:3) argues for the use of statistical instruments. "When we make our process for assessing risk more explicit--through statistical aids and other decision making policies--we make the system more transparent and we are more open and accountable to everyone about how we operate. The principle of fairness suggests that offenders should be able to know the basis for the decisions made about them." Although the debate over clinical versus actuarial assessment may never fully be resolved, it is clear that the trend has moved toward the use of statistical devices. However, in order to fully understand the use of

these instruments, one must be aware of the legal, ethical and methodological issues regarding risk assessment.

ISSUES IN PREDICTION

Ethical Concerns

It may seem absurd to ask whether human behavior should be predicted because all persons predict the behavior of others all the time. Indeed, if human behavior were unpredictable all forms of social and economic life as we know them would cease...But is this a sufficient reason for seeking to apply more systematic methods to the task of predicting human actions? Is there something unnatural about the use of mathematical models to do something that we all do intuitively? Is there a qualitative difference between intuitive methods of prediction and methods based on a reproducible procedure of data analysis? (Wilkins 1985:35)

One of the most important ethical considerations regarding the use of prediction instruments is that actuarial devices are designed to predict outcome for groups and not for individuals. "An actuarial device may be able to tell you quite accurately that two-thirds of all cases in a particular risk category will fail, but it cannot tell which ones will fail. When an inmate comes up for parole, the decision-maker still will not know whether he will succeed or fail on parole" (Hoffman & Beck 1974:203). All he will know is the percentage of offenders with similar characteristics who may be expected to succeed or fail. Is it ethical to make a decision regarding the incapacitation of an individual based upon a mathematical calculation of the probability that this offender, who has similar characteristics of other offenders, may recidivate? In "The Politics of Prediction," Leslie Wilkins (1985) argues that while it may seem like semantics, the use of the term prediction is inappropriate. The term classification would more accurately describe what these instruments are designed to do since they place individuals into categories of other individuals with similar characteristics. The prediction is then made

for that particular risk category, not for the individual. The individual is simply classified into the category.

The use of risk assessment instruments in sentencing guidelines presents another ethical consideration. In this context, people are punished for crimes they have not yet committed and might not commit if released (Tonry 1987). This is part of the issue regarding prediction errors known as false positives and false negatives. False positives are those offenders who are predicted to recidivate and do not. This type of error represents risks to the individual insofar as their freedom is taken away based on the prediction. False negatives are those offenders who are predicted to not reoffend but do so. This category represents risks to the community insofar as those crimes that were not prevented through the incapacitation of the offender. Since statistically it would be impossible to entirely eliminate the occurrence of false positives and negatives, “how we treat either category – involving equal or differentially weighted social costs – is a moral rather than statistical question” (Tonry 1987:62). Leslie Wilkins (1985:44) summarized the concern: “It is usually thought that it is better that a large number of guilty persons should be found not guilty than that one innocent person be convicted. But how many to one?” Risk assessment will always remain an imperfect science since it attempts to predict human behavior. Therefore, there will never be a solution to this question. However, it is important to remember that the purpose of risk assessment is to provide a systematic approach to decision-making and to provide guidance for corrections and rehabilitation.

Legal Considerations

The legal or constitutional concerns regarding classification and prediction are couched in terms of the Fourteenth Amendment to the Constitution that provides for equal protection and due process. There are two categories of objections based on equal protection (Tonry 1987). The first involves the explicit use of certain characteristics such as race, ethnicity, religious affiliation, and sometimes gender, as bases for classification. These are characteristics that are beyond the control of the offender and therefore should not be held against him. The Supreme Court's requirement that states be able to show a "compelling state interest" for the use of such classification systems essentially prohibits the use of these characteristics. The second category of objections opposes classifications that, "in operation, systematically treats members of different races or groups differently" (Tonry 1987:374). Many of the social variables commonly included in classifications are correlated with race, such as education, employment, and living arrangements. Therefore, many jurisdictions have chosen to exclude the use of these types of social variables because of their "presumed disparate impact on minorities" (Tonry 1987:376).

Early criminal history is also strongly correlated with race, and yet numerous studies have shown that past criminal history is a powerful predictor of future criminal behavior. Additionally, criminal history is a problematic variable due to systemic biases, as well as accuracy of information available. Few arrests lead to convictions, and those that do, are often plea-bargained down to lesser charges. Would it be ethical or legal to use non-conviction criminal history, for example, by using arrest records? Furthermore, juvenile records are not available in many states and yet the existence of a juvenile record

speaks to the age of onset, duration and intensity of an offender's criminal history, important predictors of further criminality. The inclusion of these types of variables present significant ethical and legal dilemmas, yet removing many of these status variables would significantly reduce the predictive accuracy of classification systems. Consequently, the less accurate a predictive device, the more likely its use will result in false positives or false negatives, both of which have considerable social impact. In spite of these concerns, the court very clearly supports the establishment of objective criteria for predictions. In *Schall v. Martin* (1984), the Supreme Court indicated that discretion founded in subjective criteria "fosters inequality in the distribution of entitlements and harms..."

Methodological Issues

There are numerous methodological issues that need to be taken in consideration in the development of an actuarial prediction device, some of which are general and some of which are specific to certain aspects of the device. In "Screening For Risk: A Revised Salient Factor Score," Peter Hoffman (1983) describes four general dimensions to be considered for actuarial devices: validity, stability, simplicity, and reliability. Validity refers to the power of the device. How well can it distinguish between the higher risk cases and the lower risk cases? Stability is the ability of a device to retain its predictive power over time and place. Simplicity deals with the mathematics used in scoring the device. How easily do non-researchers (e.g. parole boards, corrections agencies) understand the logic and operation of the device? If a device is too complicated there will be many errors and may not even be used. Scoring reliability, which also affects the

accuracy of a device, refers to the consistency with which actual cases can be scored. This may be affected by a number of factors, "including the complexity of the items and the difficulty in obtaining verified information about the items" (Hoffman 1983:542). Ultimately, no prediction device can be better than the data from which it is constructed (Gottfredson 1987).

The Predictors. The development of a risk prediction instrument involves the selection of predictors, the criterion variable, the sample to be used, and the statistical method for analyzing the data. Predictors are those variables that, either singly or in combination, are hypothesized to predict a particular outcome. Generally, the selection of predictors is based on what is available in existing case records. David Farrington and Roger Tarling (1985), authors of *Criminal Prediction*, argue that while this may be empirically appropriate, one needs to be aware of the weaknesses inherent in depending upon original case records. Lack of completeness and the subjectivity of the information provided often make case records inadequate for research purposes. "Ideally, predictor measures should be chosen on theoretical grounds, according to what is expected to predict the criterion" (Farrington and Tarling 1985:15). For example, social learning theory and differential association have been incorporated into risk assessment instruments through measures such as antisocial attitudes and criminal associates.

The Criterion. The criterion variable refers to that which is to be predicted. In studies of the use of risk prediction instruments, it is some measure of recidivism. The measurement of recidivism as the criterion variable presents numerous problems. The concept of recidivism is widely used in criminology and the criminal justice system, yet there appears to be little consensus regarding its definition. Broadly defined, recidivism

means a return to crime. Depending on the perspective of the agency involved, it may refer to rearrest, reconviction, reincarceration, or technical violations of probation or parole rules (Waldo & Griswold 1979). The weaknesses associated with depending upon official records to obtain recidivism rates will influence the results of a study. Additionally, "the likelihood of a conviction or a parole violation depends not only on the behavior of the offender but also on the behavior of persons in the criminal justice system" (Farrington & Tarling 1985:16). Offenders who are on parole or probation may be under greater scrutiny and therefore more likely to recidivate, if only as a technical violation. "The proverbial high rate of recidivism ... is in large part an artifact created by the parole system itself, since many of its returnees were sent back to prison for behavior that is not forbidden to the general public ... or when the offense was minor and would not have resulted in imprisonment had the offender not been on parole" (Waldo and Griswold 1979:231). There are also problems with legal categories of crimes, which may not adequately reflect the actual offense that occurred. This may occur when an offense is plea-bargained to a lesser offense, such as a felony assault charge being reduced to misdemeanor criminal endangerment. Plea-bargaining is frequently used as a result of an overburdened criminal justice system. The use of self-report surveys, in addition to official records, may reduce some of these inaccuracies. The length of the follow-up period will also influence the outcome of recidivism studies. In "Risk Prediction in Criminal Justice," Peter Jones (1996) states that although many studies are forced to have relatively short follow-up periods, such as six months, due to financial and other administrative constraints, periods should not be less than two years, if at all possible. This would ensure that offenders being studied would have an adequate length of time at

risk, as well as allow time for arrests to result in convictions and to have the convictions appear on official records. Finally, the level of the measurement of recidivism is an important decision. Often, recidivism is treated as a dichotomy--recidivism and non-recidivism, implying that success is an all-or-nothing matter. Yet, while a dichotomy may be easier to measure and operationalize, more complex measures may reflect reality more adequately. These measures may take into account frequency of offending, seriousness, change in offense behavior, time to first reoffense, or rate of offending per time at risk. "The typical rehabilitation process for criminal offenders seems to involve a series of gradual steps away from their past levels and types of criminalistic behavior and toward law-abiding behavior. To move from an offense every week to one every two to three months may represent improvement. Similarly, movement from an offense pattern that involves serious felonies to one of less serious offenses ... may also be considered relative improvement" (Moberg and Ericson 1972:51). Waldo and Griswold (1979:235) argue that "any measure ... that classifies all research subjects as either successes or failures, is thereby limited in its sensitivity as an index of variations in the effectiveness of alternative programs and policies..."

The Sample. There are two issues of concern when considering the samples used for developing a prediction instrument. The first is the sample size. Prediction models require data on a large sample of offenders. The process of developing an instrument is ideally done by constructing it on one sample, whereby "the statistical analysis identifies those predictors that have high correlations with the criterion for that specific sample" (Jones 1996:57). It would then be validated on another "to test the extent to which empirically derived relationships persist across samples" (Jones 1996:44). Therefore, the

sample initially chosen should be split in two, which naturally will reduce the size of each sample, thereby affecting the accuracy of the results obtained from those samples. Peter Jones (1996) suggests that 500 cases should be the minimum number used because less than that would make validation problematic.

The second sampling issue focuses on what sample should be used. It is essential to the accuracy of a prediction device that the sample used in the construction be representative of the population on which the device is intended to be used. A device constructed on a sample of adult felony offenders will be unlikely to accurately predict involvement in delinquency of juveniles. Prediction devices are designed to estimate, based on some group of people studied, how members of other *similar* groups will behave. Yet, as Stephen Gottfredson (1985:27) notes, “within the original sample alone, there is no adequate way to distinguish how much of the observed relation is due to characteristics and underlying associations that will be shared by new samples and how much is due to unique characteristics of the first sample.” Cross-validation refers to the process of applying the device to new samples of cases to test the relative predictive power of the shared characteristics versus the unique ones. It is designed to obtain an unbiased estimate of the accuracy of the prediction. If this is not done, the utility of the instrument as a predictor for other samples is likely to be overestimated. Gottfredson and Gottfredson (1985:59) caution that “the greatest limitation of statistical prediction methods is that the devices are developed and validated with respect to specific criteria, using available data, in a specific jurisdiction, during a specific time period. Thus any generalizations to other outcome of interest, or after modifications of the item definitions

used, or to other jurisdictions or populations, or to other time periods, are to be questioned.”

The Base Rate. Another important piece of information needed in the development of risk prediction instruments is the base rate. The base rate of an event “is defined as the relative frequency of occurrence of that event in the population of interest” (Gottfredson 1987:25). The more frequent or infrequent an event, the more difficult it is to predict it. This seems logical for infrequent events, but is more difficult to understand for frequent events until one remembers that when one event occurs frequently, there is some other event that will be occurring infrequently. Therefore, the prediction is also being made for that infrequent event. Stephen Gottfredson (1987:25) provides the following example to illustrate the importance of knowing an event’s base rate: if the base rate of failure on parole is .20, the prediction that no one will fail on parole would be correct 80 percent of the time. One would also be wrong 20 percent of the time, but one has no way of estimating which 20 percent will fail. If a predictive device can predict parole outcomes with 78 percent accuracy, then one would still be better off simply using the base rate. Gottfredson (1987:25) notes that “developers of predictive tools often have failed to consider base rates and have consequently made classifications or predictions on the basis of criteria that produce larger errors than would the simple use of the base rate.”

The Method of Analysis. While a complete discussion of the various methods of analysis used in criminal prediction will not be presented here, it is important to note that there are numerous methods available. For example, the method used by Ernest Burgess (1928) for his study of failure on parole (eventually to become known as the Burgess method) is an unweighted additive model whereby the predictor variables are

dichotomized (and usually given a value of 0 or 1) and then added up to a score that would then classify an offender into a particular category. Other methods include models where the predictors are weighted, multiple regression analysis, and clustering models. In "Predicting Failure on Parole." William Wilbanks (1985:90) compared the relative predictive efficiency of five different methods and found that "the more sophisticated statistical methods make worse predictors of parole outcome than do the less complex methods." He also found that there was little difference among the various methods in respect to the two types of errors, the false positives and the false negatives. Gottfredson and Gottfredson (1985) also conducted studies comparing several techniques and found little difference in the predictive power. "Simpler and more easily understood and implemented statistical prediction devices may work as well as those based on more complex techniques ... therefore those who would develop risk-screening devices for operational use ... would be advised to base their decisions as to the method(s) to employ on factors other than the statistical power inherent in the technique" (Gottfredson and Gottfredson 1985:75).

RISK ASSESSMENT INSTRUMENTS

Salient Factor Score

In the early 1970s, the United States Board of Parole adopted an actuarial prediction device, called the Salient Factor Score (see Appendix A), as a risk assessment aid in parole selection. The Parole Commission's goal for the development of an actuarial device was to limit the broad discretion available by establishing a "decision framework or structure that would be specific enough to guide and control discretion and thereby provide consistent and equitable decisions, yet would be flexible enough to allow deviation from customary policy when warranted by the facts and circumstances of the particular case" (Hoffman 1974:478). The instrument was developed with data collected as part of a research project conducted by the Research Center of the National Council on Crime and Delinquency, the United States Board of Parole, and the National Institute of Law Enforcement and Criminal Justice, Law Enforcement Assistance Administration. With the establishment of parole guidelines and the development of the Salient Factor Score, "the U.S. Parole Commission became the first paroling agency to implement a system that provided for the use of a recidivism prediction instrument in a way that had a visible, measurable impact on paroling decisions" (Hoffman 1974:478). The instrument was put into use in a pilot project that began in 1972 and, by 1974 was permanently adopted for all federal parole selection decisions.

The development of this instrument entailed the use of three randomly selected samples. The first sample (N=902) was used as the construction sample, consisting of a 25 percent sample of all persons released from federal prisons by parole, mandatory release, or expiration of sentence during the first six months of 1970. The second sample

(N=919), used as a validation sample, consisted of an additional 25 percent sample of offenders released during the same time period. The third sample (N=662) was used as an additional validation sample, made up of a 20 percent sample of people released during the second six months of 1970. A code sheet of 66 variables that predicted either favorable or unfavorable outcome after release was developed. These items included information about present offense, prior criminal record, age, education, employment history, and living arrangements. From these variables, nine items or "salient factors" were selected for use in the device. Items were excluded, even if they were predictive, if they posed ethical problems, if they did not appear frequently enough to be useful (e.g. escape history), or if they appeared to overlap substantially with other items already included. The resulting nine items were prior convictions, prior incarcerations, age at first commitment, auto theft, parole revoked, drug history, education level, employment, and living arrangement. Two of the items were trichotomous, and the others dichotomous, resulting in scale with a range of possible scores from zero to eleven. These twelve possible scores were then collapsed into four risk categories: very good risk (scores of 11-9), good risk (scores of 8-6), fair risk (scores of 5-4) and poor risk (scores of 3-0). The outcome criterion measure of recidivism agreed upon by the parole board was a new conviction resulting in a sentence of sixty days or more, a return to prison for a technical violation, or an outstanding absconder warrant. The follow-up time period was within two years from date of release. Based on the two validation samples, the Salient Factor Score proved to be a useful instrument in predicting parole outcome, producing a correlation of .283 on the first validation sample and .277 on the second (Hoffman and Beck 1974).

Since the purpose of a predictive instrument is to predict prospective samples, in 1976, Peter Hoffman and James Beck conducted a follow-up validation of the Salient Factor Score utilizing a cohort sample (N=1011) of offenders released during 1972. While the predictor variables remained the same, two other criterion variables were included. The initial criterion measure used a new conviction resulting in a sentence of sixty days or more, the second criterion used any new conviction other than for petty offenses, and the third criterion included a new arrest for a criminal offense (other than a petty offense). "Given the burden of proof required to obtain a criminal conviction and the effect of plea bargaining on sentencing, it could be argued that utilization of new arrest(s) as a criterion measure of unfavorable outcome would be more reflective of underlying criminal behavior than use of either new conviction or commitment" (Hoffman and Beck 1976:72). It was found that the Salient Factor Score is slightly more powerful in prediction of the new arrest criterion than the new conviction or new commitment criterion. It is important to note, however, that these results may not be an accurate reflection of criminal activity. It may be that the instrument does a better job at predicting police behavior by identifying those individuals that the police would be likely to suspect.

In order to further test the predictive power of the Salient Factor Score, Hoffman and his associates (1978) used an additional validation sample of 1971 federal releasees, using both a two- and three-year follow-up period. The longer follow-up period would allow an assessment of the association between time at risk and likelihood of unfavorable outcome. The study used the three criterion measures of favorable/unfavorable outcome discussed above. It was found that "agreement among the three criterion measures

chosen is quite high. Consequently, in assessing the predictive power of the salient factor score the choice of criterion measure appears to make little difference” (Hoffman et al. 1978:51). Moreover, the predictive power of the instrument was confirmed by demonstrating that the percentage of cases with favorable outcome decreased consistently as one moved from higher to lower scores, regardless of the criterion measure used. In terms of the use of the three-year follow-up period, the results showed that the rate of unfavorable outcome decreased over time. That is, for releasees who survived the first year at risk, the likelihood of unfavorable outcome was lower for the second year and lower again during the third year.

Further tests of the Salient Factor Score continued to assess and confirm the predictive accuracy of the instrument in predicting parole outcome. A study released in 1985 found that the instrument retains its predictive power even when the definition of recidivism is a new sentence of imprisonment of more than one year. The outcome measure of a longer sentence was designed to target more serious offenders (Hoffman and Beck 1985). This study also extended the follow-up period to five years, further testing the predictive power over time. Additionally, a recent evaluation of the instrument conducted by Peter Hoffman (1994) found that the instrument continues to be an appropriate instrument for assessing risk of recidivism. A sample of prisoners released in 1987 was compared to the samples of those released in 1978 and the original samples from 1970, 1971 and 1972. The predictive accuracy of the instrument remained stable over the seventeen-year period. “These findings add to the evidence that the Salient Factor Score is able to separate prisoners into categories having significantly different probabilities of recidivism, and that its predictive accuracy has not diminished

over time” (Hoffman 1994:485). It should be noted, however, that while the Salient Factor Score continued to be tested and shown to be accurate, these tests were conducted primarily by Peter Hoffman, one of the people who was responsible for developing the instrument. No other studies attempting to validate the Salient Factor Score were found in reviewing the available literature.

Statistical Information on Recidivism

During the same period of time that the Salient Factor Score was being developed in the United States, the National Parole Board of Canada undertook research aimed at identifying the major factors that determined release decisions. This move was based on similar concerns regarding the inconsistency and subjectivity of parole decision-making. The findings of the study were then used to construct a standardized instrument, called the Statistical Information on Recidivism (SIR), which would guide National Parole Board decisions.

The SIR scale, developed by Joan Nuffield (1982), was constructed by examining the post-release recidivism of a random sample of 2475 male offenders released from Canadian penitentiaries between 1970 and 1972. Recidivism was defined as rearrest for an indictable offense during a post-release follow-up period of three years. Nuffield obtained extensive information on the criminal histories and demographic characteristics of the offenders and examined how these were associated with recidivism. Fifteen variables were found to be able to predict recidivism. These included the following criminal history factors: offense type, sentence length, security classification, escape history, age at first adult conviction, record of previous incarceration, previous breaches

of supervision, previous convictions for assault, violent sex offenses, breaking and entering offenses, and time at risk since last offense. The social history variables included age, marital status, number of dependents, and employment status at the time of the last offense (Nuffield, 1982).

Each one of these factors was weighted based on the amount of difference seen in the recidivism rates of the offenders who do or do not possess the characteristic. Depending on whether the characteristic increases or decreases the chance of recidivating, the factor would be given a positive or negative value. Total scores were calculated by adding the scores for the fifteen individual items. Five risk categories, ranging from very good to poor risk, were then established, each containing 16 to 25 percent of the sample. These categories were established by using half of the random sample selected. The scale was then validated on the other half. It was found that the SIR scale was able to differentiate between low risk and high-risk offenders.

In 1996, Bonta and his associates published a study retesting the validity of the SIR scale. The study followed a sample of 3,267 male inmates released in 1982 and 1983. Recidivism was defined as a return to custody because of a new offense or a parole violation. Based upon a new sample drawn a decade after the scale was constructed, the SIR continued to show an ability to predict recidivism, with a Pearson correlation of .42, $p < .001$ (Bonta et al. 1996).

The study found that the highest risk category and lowest risk category were the best at predicting recidivism and that the mid-range categories were not as clearly defined. The analysis also showed that cutoff scores were appropriate. Alternative cutoff scores were tested but none were found to improve the scale's ability to differentiate

among the risk categories, or to differentiate the true recidivists from the false positives. Additionally, it was found that all the variables predicted recidivism except for previous conviction for violent sex offense. Including this item in the scale did not improve its predictive power significantly, therefore there was question as to whether it should remain in the scale. Further study did find, though, that although this item was not predictive of general recidivism, it was predictive of "narrowly defined violent recidivism" (Bonta et al., 1996:69).

Dynamic Risk Factors

As the prediction of recidivism has evolved, instruments have fallen into three categories. The first generation instruments were those that were based on clinical judgments. Second generation assessments are the early actuarial instruments, such as the SFS and the SIR, and are based almost entirely on criminal history items. Further research into the prediction of recidivism led to the third generation instruments, those that incorporated both static and dynamic risk factors (Bonta 1996). In *The Psychology of Criminal Conduct* (1994), Andrews and Bonta identified two types of risk factors: static and dynamic. Static factors are those that are fixed, such as previous convictions, race and age. While these are predictive of recidivism, they cannot be changed. Dynamic risk factors, also referred to as criminogenic needs, have also been found to be predictive of recidivism. These variables can change over time and can be identified and altered through treatment programs. These include such variables as substance abuse, antisocial values and antisocial peers. Gendreau, Little, and Goggin (1996:588) conducted a meta-analysis to identify the predictors of adult recidivism and concluded

that “variables such as age, criminal history, companions, family factors, gender, social achievement and substance abuse are significant and potent predictors of recidivism.” In order to not only predict recidivism, but also to direct treatment to reduce the likelihood of recidivism, third generation instruments included measures of both static and dynamic risk factors. These instruments are more than simply predictive instruments, they are case classification systems, classifying offenders based on risk and need. The most commonly used of these instruments are the Wisconsin Case Classification/Staff Deployment Project (Baird, Heinz and Bemus 1979) and the Level of Supervision Inventory. While the Wisconsin Instrument uses the term criminogenic needs and the LSI refers to dynamic risk factors, both instruments are referring to those characteristics of offenders that put them at greater risk for recidivism but are amenable to change through treatment.

Wisconsin Case Classification/Staff Deployment Project

The Wisconsin Case Classification/Staff Deployment Project (see Appendix B) was developed in 1979 through the Wisconsin Bureau of Community Corrections. At that time, the Bureau was supervising approximately 18,000 adults and 1,000 juveniles with a staff of 380 probation and parole officers (Baird, Heinz and Bemus 1979). The state of Wisconsin includes urban areas, areas of a mixed urban and rural settings, and primarily rural areas. Any instrument used would have to be applicable to all settings. The development of the Wisconsin classification system was founded in two ideas. The first was again the issue of the subjectivity of clinical assessments regarding risk. “The criteria used in determining the appropriate level of supervision are probably as varied as

agents' experiences, education and philosophical approaches to the job" (Baird, Heinz and Bemus 1979:1). The second idea was based on the dynamic risk factors, addressing the needs of offenders. An instrument designed to assess the needs of offenders can assist personnel in targeting appropriate resources to those offenders that need them. "A classification system should, at minimum, provide a rationale for deploying staff resources, enabling administrators to make efficient use of available staff, and to avoid providing services to offenders who do not require them. A complete classification scheme can also assist probation and parole agents in identifying needs and problems of clients and provide a basis for more effective case planning" (Baird, Heinz and Bemus 1979:3).

The developers of the Wisconsin Instrument felt that initiating the use of a classification scheme within an agency hinges upon a number of key factors (Baird, Heinz and Bemus 1979). The scoring system should be as simple as possible, in order to assure reliability. The rationale for classification should be apparent and accepted by the staff. If the staff feels that the classification criteria are inappropriate, use of the instrument will be resisted and the treatment recommendations may be ignored. Consideration of supervision agents' subjective judgment should be maintained. The use of an actuarial instrument should not automatically override professional discretion, although justification for deviation from the classification by the instrument should be provided. Finally, there should be periodic reassessments of offenders, in order to regularly appraise their progress. Reclassifications are necessary "because clients' situations, needs, and risk of continued unlawful behavior may alter substantially over time" (Baird, Heinz and Bemus 1979:5).

The Wisconsin instrument incorporates three separate scales, the Risk Scale, the Reassessment Risk Scale, and the Needs Scale. The Risk Scale, constructed from a randomly selected sample of 250 discharged or revoked cases, was developed in such a way as to not be based "simply on revocation or discharge as the outcome criterion, but would assess a client's propensity for further unlawful or rule-violating behavior" (Baird, Heinz and Bemus 1979:9). Therefore, analyses of the outcome measures included absconsions, rule violations, arrest, misdemeanor and felony arrests and revocations. Criminal history and socioeconomic factors were entered in a multiple regression analysis and ten factors were identified as those that would best predict future behavior. These include prior criminal history items, alcohol and drug usage, attitude, employment and living arrangement measures. One final item, recent assaultive offenses, assigned an additional fifteen points, as these offenses mandated maximum supervision. It should be noted that the term 'factors' comes directly from the developers of the Wisconsin Instrument, although the method of analysis used to determine the predictive items was multiple regression and not factor analysis.

The Reassessment Risk Scale shifts the emphasis from criminal history factors to items that reflect a client's behavioral adjustment while on probation or parole. Included are items measuring a client's response to court-imposed conditions, use of community resources, and interpersonal relationships. This scale is used at six-month intervals and allows clients who have adjusted well in the community to progress to lower levels of supervision. It can also identify those offenders who continue to exhibit problems to higher supervision levels.

The Needs Scale was developed to specifically identify sources of problems of offenders. "to aid in formulating a case plan" (Baird, Heinz and Bemus 1979:12) and target those needs that could be altered through treatment. Items measure education, employment and financial factors, relationship characteristics, mental and emotional factors, drug and alcohol use, and health and sexual behavior. Periodic reevaluations would be conducted to reflect changes in the offender's situation, needs and risk of continued criminal behavior. Reclassification would require that case plans and goals be altered appropriately.

Based on the information obtained from the Risk Scale, the Risk Reassessment Scale and the Needs Scale, offenders would then be classified into three different categories of minimum supervision, medium supervision, and maximum supervision. In this manner, resources would be targeted to those that need them the most and away from those who would not benefit from the additional supervision. In order to test the effectiveness of the Wisconsin instrument, the developers of the project chose two demographically comparable areas in Wisconsin. Matching offenders based on the risk and needs assessments, one area would implement the new classification system, and compare it to the other area, where offenders would be classified according to the instrument but would continue to receive only routine supervision. It was hypothesized that any differences in outcome could be attributed to differences in the level of supervision assigned, based on the use of the assessment instrument.

Results of this study were analyzed for each one of the supervision levels, looking at seven categories of offenses: new offenses, offenders with felonies, offenders with misdemeanors, absconsions, arrests, rules violations, and revocations. For the maximum

supervision clients, it was hypothesized that “the assessed criminal activity of a sample of individuals as requiring maximum supervision and subsequently placed under each supervision will be significantly lower than that of a comparison group so classified but supervised in the usual manner” (Baird, Heinz and Bemus 1979:25). It was found that offenders supervised under the new classification standards had significantly lower rates of criminal activity in five of the seven categories analyzed. Two categories, felonies and absconsions, were also lower under the new standards, but the differences were not significant at the .05 level.

For the medium supervision clients, the test and control groups had essentially the same requirements. Therefore, the hypothesis was made that the criminal activity of offenders classified as requiring medium level supervision would not differ whether the offender was actually placed under such supervision or supervised in the usual manner. The results showed that there were no statistically significant differences between the groups for any of the categories.

Offenders classified as minimum supervision had their contacts reduced under the new classification standards. “It was hoped that contact with this group could be reduced without adversely affecting outcomes” (Baird, Heinz and Bemus 1979:28). The hypothesis was the same as that for the medium supervision group. The offense categories were slightly lower for the test group than for the control group, although none were significantly different at the .05 level.

After following the study for two years, it was concluded that “the data clearly indicate that assigning different levels of supervision based on identification of risk and needs factors is having a significant impact on outcomes in Wisconsin” (Baird, Heinz and

Bemus 1979:29). Criminal activity amongst high risk/high needs offenders declined significantly when supervisory contacts were increased. At the same time, decreasing contacts with low risk offenders appeared to have no adverse affects. “If trends noted in this two year follow-up continue, increased intervention with high risk/high need clients will be quite effective. A substantial proportion of the additional cost is immediately offset by reducing required contacts with low risk/low need probationers and parolees. But most importantly, the reductions in arrests, new convictions and revocations in the high risk/high need clients will generate considerable savings and reduce jail and prison populations” (Baird, Heinz and Bemus 1979:30).

Level of Supervision Inventory

Incorporating his ideas of static and dynamic risk factors, Andrews (1982) developed a Canadian risk/needs assessment instrument using research conducted through the Ministry of Correctional Services in the Province of Ontario. The development of this instrument, called the Level of Supervision Inventory (LSI; see Appendix C), was guided by the following “values” (Andrews 1982:1). *Uniformity* refers to the instrument as a “standard record of a reasonably comprehensive survey of attributes of offenders and their situations conducted prior to decision-making.” It must be *nonlimiting*, allowing officers to seek and act upon information additional to that sampled by the LSI, since “no inventory of reasonable length could sample all possible relevant factors and their interdependencies.” It is *professional*, in that the LSI is designed as an aid to professional decision-making and that overrides of the instrument are to be well-documented so that the information may be added to the body of

knowledge guiding the refinement of an instrument. It must be *comprehensive*, referring to the idea that while a few items may be highly predictive, they are not particularly helpful when it comes to decision about the targets of intervention (i.e., being young, male, and having a family with a criminal history). Therefore, the instrument needs to tap into a wide variety of attributes that can direct various courses of action. *Flexibility*, the last value addressed by Andrews, refers to the idea that an instrument needs to be structured in such a way that modifications can be made if needed. "The zero-one format makes it very easy to add, delete, or modify items when experience suggests that the modifications would increase the validity and utility of the instrument. The LSI deliberately includes a number of blank items in order to encourage the systematic exploration of issues of local or more wide-ranging concern" (Andrews 1982:2). Zero-one format refers to how the questions are designed. The questions are either yes-no questions that receive a one for a yes, zero for a no, or a zero to three scale ranging from very unsatisfactory to satisfactory. In addition to these values that guided the development of the LSI, the instrument was founded in the idea of the risk principle. "According to the risk principle, intensive controls and services are best reserved for higher risk cases, while lower risk cases are best assigned to lower levels of service and control" (Andrews et al. 1986:377). In a study conducted on a sample of young adult probationers whose level of risk was clinically assessed at an intake assessment, it was found that not only are higher levels of supervision wasted on low risk cases, they are even detrimental. "Intensive supervision was associated with significantly improved mean outcome scores among the higher risk cases and with significantly poorer outcome scores among the lower risk cases" (Andrews et al. 1986:382). Higher risk probationers

had a 58 percent recidivism rate if they were in the regular supervision program, as compared to a 31 percent recidivism rate in an amplified program. Considering only the lower risk cases, offenders in a regular supervision program had a 10 percent recidivism rate, whereas offenders placed in an amplified supervision program had a 17 percent recidivism rate (Andrews 1989).

Derived from a social learning perspective that assumes that behavior is learned through the interaction of the individual with the environment, the LSI is used to measure an offender's propensity to violate rules (Andrews 1982). The instrument measures risk factors, "personal attributes that are assessable prior to service and are predictive of future criminal behavior" (Andrews, Bonta, and Hoge 1990:24), and criminogenic needs. These are broadly defined as "those set of attitudes, values, beliefs and behaviors held by an offender that support a) negative attitudes toward all forms of official authority and conventional pursuits (e.g. education, work, stable prosocial relationships), b) deviant values that justify aggression hostility, and substance abuse, and c) rationalizations for antisocial behavior that free one from any moral constraints" (Andrews 1982:7). Criminogenic needs are dynamic attributes of offenders and their circumstances that, when changed, are associated with changes in the chances of recidivism. The importance of identifying the needs of offenders was noted by Bonta and Motiuk (1985:334), who pointed out that "the assessment of needs is required because it is in the best interests of corrections to address identifiable problems of offenders (e.g., alcoholism, lack of vocational skills) because, sooner or later, most offenders will be released back into society."

The selection of the items for the LSI was founded in research on recidivism conducted in Ontario, through the Ministry of Corrections. An original interview schedule of some 30 pages was studied and then reduced to a single page inventory of 58 dichotomous items which "cluster into a number of relevant subcomponents" (Shields and Simourd 1991:182). The subcomponents are criminal history, education/employment, financial, family/marital, accommodations, leisure/recreation, companions, emotional/personal, and attitudes/orientation (Andrews 1982). This inventory was designed as a standardized interview schedule that would sample the offender's background and present situation, gathering information during a 45-minute interview with the offender, with additional information obtained through official records. During the summer of 1980, Ottawa Probation and Parole officers began to use the LSI on probationers on a routine basis. A sample of 598 completed LSIs constituted the primary validation sample. An initial report of findings based on this first sample was submitted by Andrews (1982). Testing the association between LSI scores and in-program outcome status, this initial study found an overall correlation of .47. The correlations between LSI score and any evidence of recidivism was .38, and between LSI score and reconviction was .46. Additionally, the LSI was found to be able to predict number of reconvictions (correlation of .40) as well as severity of disposition among official recidivists (correlation of .39). According to Andrews (1982:19), "the single most informative estimate of the predictive validity of an assessment instrument in probation is its ability to distinguish between highly favorable (early termination) and highly unfavorable (incarceration) reinvolverment with the court." The LSI obtained a .70 correlation in this area. Overall, the predictive ability of the LSI was demonstrated by

the fact that 90 percent of the recidivists had LSI scores that fell outside the minimal risk range and 96 percent of the multiple reconviction cases and 94 percent of the incarcerates were in the maximum risk category. "These data suggest that, even with correlation coefficients in the 0.40s, users of a risk/needs assessment instrument are able to correctly identify the vast majority of the frequent and/or serious offenders" (Andrews and Bonta 1994:171).

A second report submitted by Andrews and Robinson (1984) described the results of continued follow-up of the original sample. After a two-year follow-up period, the magnitude of the relationship between LSI scores and recidivism, defined as any evidence of recidivism including new charges pending, increased from .38 to .43. Correlation between LSI scores and incarceration was .37. The study found that the majority of serious re-offenders had LSI scores that placed them in medium and maximum risk categories: 96 percent of cases incarcerated for more than two weeks and 92 percent of the cases reconvicted for more than one new offense. Additional analyses found that the "statistical reliability of the predictive validity estimates was highly stable across samples of probationers varying on age, gender, criminal record and across the two offices in Ottawa" (Andrews and Robinson 1984:4). The only difference of any magnitude was in the case of gender: .55 for women versus .40 for men. It should be noted, however, that of the 561 offenders sampled, only 97 of those were women. Gender was the only comparison group that had such a large difference in sample size.

Concerned with prison overcrowding and the difficulty of accurately identifying appropriate offenders for halfway house placement, the LSI was administered to incarcerated offenders who were placed in halfway houses and inprogram and

postprogram progress was monitored. Studying two different samples (N=75 and N=89) drawn from three halfway houses, Bonta and Motiuk (1985) reported that the LSI total score was predictive of halfway house success (program completion) for both the first sample ($r=.52$, $p < .001$) and the second sample ($r=.28$, $p < .05$). After a one-year follow-up, correlations with reincarceration were .40 for the first sample and .32 for the second sample. Offenders with scores that placed them in the minimum risk category showed a success rate of 95 percent for both samples. After one year, 90 percent of the first sample and 100 percent of the second sample of low risk offenders were free from reincarceration. It is clear that the LSI functions well for identifying the low risk offender. It did not predict the high-risk group as well, but the authors argue that while alteration of the cutoff scores may improve prediction, such changes would also increase the rate of false positives (Bonta and Motiuk 1985:344). Since one of the potential roles of halfway houses is rehabilitation and reintegration of offenders, it would be important to be able to identify needs of offenders. Many of the subcomponents of the LSI function to identify offender needs. "They describe certain attributes of offenders and their situations that are amenable to change or manipulation and related to recidivism" (Bonta and Motiuk 1985:347). This study found that many of the subcomponents were predictive of outcome in the halfway houses and recidivism one year later. Of particular importance were the employment, leisure, and family/marital variables, which are areas that halfway house staff members are capable of addressing (Bonta and Motiuk 1985). In 1990, Bonta and Motiuk published a study that further addressed the diversion of incarcerates to halfway houses. In a quasi-experimental evaluation of halfway house classification, the LSI was administered to 580 inmates from three jails. Inmates from

jails 1 and 2 that scored low on the LSI were flagged for placement in a halfway house, whereas inmates from jail 3, the “blind” institution, were administered the LSI but the scores were not revealed to the selection board. Placement of inmates from jail 3 followed the existing selection procedures. Since random assignment was not possible, comparisons of the inmates, based on one hundred thirty variables ranging from prior prison history to substance abuse, were made in order to assure that there were no significant differences among the three jails. No consistent differences were found. The halfway house classification rates for low-scoring inmates for jails 1 and 2 were 65 percent and 42 percent respectively. This rate did not differ statistically. The classification to halfway houses of low-scoring inmates from jail 3 was 16 percent, a statistically significant difference from the rates of the flagging institutions. All of the placement to the halfway houses were successful. Furthermore, postrelease follow-up indicated that the recidivism rate for low scoring offenders was significantly less than that for higher scoring offenders (13% vs. 46%). The data from this study suggest that inmates are being overclassified in terms of security needs and that “faced with prison overcrowding, a possible solution for correctional institutions may be to use objective classification instruments to identify those inmates who can safely be placed in the community” (Bonta and Motiuk 1990:504). Further study of inmate classification to Community Resource Centres (CRCs), Canadian halfway houses, found that even offenders with lengthy sentences, including those convicted of violent offenses such as sexual assault and forcible confinement, had high success rates with CRC placement, when risk assessment included the LSI. “These findings suggest that the assessment of risk becomes more accurate when a more comprehensive assessment is completed (LSI)

than when reliance is made upon a few variables such as offense and sentence length” (Bonta and Motiuk 1986:9).

Having tested the LSI on probation and parole offenders, and on incarcerates for diversion to halfway houses, researchers were interested in the extent to which objective risk assessment could be used to reduce prison security overclassification. Bonta and Motiuk (1992:344) noted that “overcrowding observed in the prison system appears most severe in jails and in the higher security institutions. Even within multilevel prisons the most severe overcrowding is found in the maximum-security areas. One of the major impediments to matching security levels to offenders correctly is the lack of objective risk-assessment instruments for inmates.” A study of 580 male inmates was conducted using both normal classification procedures as well as the LSI, to determine the extent to which a risk assessment instrument could predict institutional misconduct. In addition, one-year postrelease reincarceration outcomes were analyzed. Correlations for disruptive behavior in institutions were divided into different groups: misconducts, which pertain to violations of institutional roles or criminal code offenses, assaults, and an additional variable called PROBLEM, which is a combination of various disruptive behaviors. Correlations between LSI scores and these three categories were .23, .16 and .33 respectively ($p < .001$). Comparing the LSI scores with the normal classification methods, it was found that 37.5 percent of offenders were overclassified. Looking at the recidivism rate, it was found that 223 of 559 inmates (39.8 percent) were reincarcerated. The correlation between LSI total score and reincarceration was $r = .35$ ($p < .001$). “The present study found LSI scores to predict prison infractions and reincarceration for a representative sample of incarcerated offenders” (Bonta and Motiuk 1992:351).

TRANSFERABILITY OF RISK ASSESSMENT INSTRUMENTS

One of the most important characteristics of risk assessment instruments is the extent to which they can be applied to populations other than those on which they were constructed. While it is unlikely that an instrument could be universally applicable, agencies often use instruments developed elsewhere. Many jurisdictions adopt already developed instruments based on two rationales: first, most states cannot afford the expense of developing their own instrument and second, existing instruments predict equally well on various populations (Wright, Clear and Dickson 1984). Unfortunately, different populations may have different risk factors, and those need to be taken into consideration in the use of a classification system. If, for example, the needs of women differ from those of men, it makes no sense to use an instrument that does not measure those needs. A risk assessment instrument needs to be tested on the target population prior to adopting it for classification. "Notwithstanding the economic waste resulting from administering invalid risk-assessment instruments, the price of not investing in adequate research is the potential misclassification of hundreds of offenders. Moreover, accepting what is claimed to be a universal classification system precludes the establishment of a bona fide case management system designed to match local agency resources to the rehabilitation and supervision needs of clients. Such a strategy, in the long view, will only contribute to eroding public confidence in probation services" (Wheeler and Hissong 1990:405).

As risk-assessment instruments have gained popularity, a small number of studies have been conducted to test their transferability. There are several different areas at issue in the applicability of risk assessment instruments. One of these is the transferability of

instruments from one jurisdiction to another. Several studies researched the extent to which certain instruments, developed in one part of the country, could be applied to other areas. Wheeler and Hissong (1990) tested the Georgia Risk Scale on a sample of Texas probationers. The Georgia instrument model was constructed on a probation sample that was predominantly rural, 53 percent white and 47 percent black, and nearly a quarter of the misdemeanor probationers were charged with DWI. On the other hand, the Texas sample was urban, 60 percent white, 21 percent black, and 19 percent Hispanic, and 85 percent of the misdemeanor probationers were charged with DWI. The outcome measure of failure included a law violation resulting in conviction, technical violation leading to revocation of probation, and absconsions. Success was defined as successful termination of probation or continued supervision at the end of the study period. It was found that the instrument was unable to distinguish between the different levels of risk for felony probationers. "Significant difference was not found among the survival functions for different risk groups. A maximum risk felon was no less likely to survive beyond any period than felons assigned to the other two lower risk categories... Furthermore, little difference existed in the likelihoqd of recidivating among the risk groups. The risk-assessment instruments performed poorly in identifying high-risk and low-risk felony probationers" (Wheeler and Hissong 1990:403). The problem with this conclusion in the study is that the classification of offenders led to differential supervision levels. That is, the maximum risk cases received more intensive supervision than lower risk cases. This is noted by the authors, who conclude that "Without the increased intervention associated with being classified as maximum risk, the failure rates would have been significantly higher than lower risk groups. This interpretation suggests that the risk-assessment

instrument appropriately identified probationers most likely to recidivate" (Wheeler and Hisson 1990:404). The study did find significant relationship between risk classification and time to recidivism for misdemeanor probationers. For maximum risk probationers, the probability of surviving beyond the first year was 38 percent. The probability for survival beyond the same time period for medium and minimum risk offenders was 68 percent and 76 percent respectively. These differences were noted in spite of the fact that the misdemeanor offenders received differential supervision based on the classification. The conclusions drawn by the authors of this study address several issues. First, there needs to be additional research in evaluating the impact of differential supervision levels on outcome, "wherein the instruments differentiating capabilities would be tested while holding such variables as offender characteristics and officer/client contacts constant across risk groups" (Wheeler and Hisson 1990:405). Secondly, it appears as though the same risk scale may not be applicable to both misdemeanor and felony offenders. Furthermore, there is the possibility that differential supervision may be more effective for high-risk felony offenders than for less serious offenders.

Wright, Clear and Dickson (1984) tested the Wisconsin Instrument on a population of New York City probationers to determine whether an instrument constructed on a sample drawn from Wisconsin would be valid for a sample drawn from New York. The validation study consisted of selecting a sample of 366 closed cases from each of the five boroughs of New York to determine whether the variables in the Wisconsin model are related to outcome of probationers in New York. The instrument was tested using three models: (1) the original instrument with variables weighted, (2) the original instrument with the variables not weighted and (3) the original instrument with

each variable changed to a dichotomy. The first step in testing the model involved examining the strength of the relationship between the variables in the Wisconsin instrument and the outcome. Many of the variables were found to be unrelated to outcome: address changes, percentage of time employed, alcohol/drug usage, prior periods of supervision, prior revocations and prior convictions. Furthermore, altering the weights assigned to the variables or dichotomizing them did not improve the results. No variable previously found to be insignificant was consequently found to be related to outcome. Wright, Clear and Dickson (1984:122) suggest two possible explanations for the results of this study: "Perhaps offender groups are so different as populations that the conditions they exhibit related to risk vary dramatically--maybe New York is not Milwaukee. Alternatively, maybe statistical prediction methods are so poorly developed --so unstable as models--that transfer of models is questionable just on the grounds of limited technology alone." They conclude that "some agencies will elect to implement existing devices with minor modifications. Because the potential exists that these instruments do not discriminate cases as the agency expects them to, probation and parole agencies should not place their confidence in these instruments until they have been validated" (Wright, Clear and Dickson 1984:127).

The Level of Supervision Inventory, tested on a variety of offender populations in Canada, has been adopted by more and more agencies in the United States. Unfortunately, few studies have been released regarding the use of the LSI, possibly because it is still a relatively new instrument, therefore follow-up times may be still in effect. The state of Colorado began using the LSI in 1994 and has submitted an early validation study regarding its use (O'Keefe and Wensuc 1998). Participants in the study

included parolees, community corrections offenders, and probationers. Initial results were tested on three outcome variables. The first outcome variable was a rank ordering of the most serious type of re-offense, with the ratings involving the following: none, failure to appear, technical violation, DUI, misdemeanor, nonviolent felony, and violent felony. The second outcome variable was dichotomous: offenders rearrested for a misdemeanor or felony were recidivists while all others were coded as non-recidivists. The third outcome variable was also dichotomous: offenders were classified as successful or unsuccessful program completers. Pearson correlations of LSI scores to the different outcome measures for the groups ranged from .25 to .36, $p < .001$.

In a subcomponent of this study, another analysis was conducted using a sample of 172 parolees and 85 Community Corrections offenders (O'Keefe, Klebe, and Hromas 1998). The Community Corrections centers, which are halfway house, are referred to as ComCor. Participants were administered the LSI and the Wisconsin Case Classification System. Two outcome measures were collected to establish predictive validity. The first measure consisted of a rating from zero to nine of participants' compliance with supervision, ranging from 100 percent compliance with no violations to charged with a new offense/felony. The results indicated that the LSI was able to differentiate between recidivists and non-recidivists among the parolees, but found no significant differences on LSI risk scores for ComCor offenders. It was noted, however, that ComCor case managers reported that they found the LSI to be confusing and difficult to administer. "Exploratory analyses revealed that the low predictive power may have resulted from individuals' assessment styles" (O'Keefe, Klebe, and Hromas 1998:20). Finally, the study found that there were no significant differences between the groups on the

Wisconsin risk/needs scores. The researchers in this study concluded that while cautious optimism may be called for regarding the use of the LSI for parolees, "the research findings stress the relevance of rigorous training and quality assurance with the LSI. It is a complex instrument, particularly for individuals with limited assessment training. The high frequency of scoring errors is a concern as is the scoring variation among assessors" (O'Keefe, Klebe, and Hromas 1998:21).

Based on this concern, a follow-up study was conducted examining the inter-rater reliability and predictive validity of the LSI across several ComCor centers, where extensive training and vigorous quality assurance was provided (Babe, O'Keefe, and Klebe 1999). The participants in this study were 212 felony offenders from six ComCor centers, five urban and one rural. Offenders were assessed using the LSI upon intake. Additionally, researchers readministered the LSI to a subsample of 46 offenders in order to examine inter-rater reliability. Three outcome measures were obtained: offender compliance ratings, reincarceration rates at one year, and rearrest rates at one year. Inter-rater reliability was found to be moderately strong ($r = .73$). Furthermore, predictive validity results indicated that LSI scores were positively correlated to in-program compliance ($r = .34$), reincarceration rates ($r = .28$) and arrest rates ($r = .36$). "These findings suggest that the LSI is a plausible risk assessment for community correction centers in Colorado. Nonetheless, caution needs to be exercised when implementing this instrument as a risk tool ... when it is administered by individuals lacking assessment or clinical training" (Babe, O'Keefe, and Klebe 1999:5).

One of the specific populations on which there has been very little research regarding recidivism and the use risk assessment instruments is the female offender. This

is primarily due to the fact that women represent a small proportion of offenders. While the study of female criminality has gained popularity, most of the focus has been on developing theoretical understanding of female deviance and comparisons of male and female delinquency. Recidivism and the prediction of the risk of reoffending have received little attention. For example, Gendreau, Andrews, Goggin and Chanteloupe (1992) conducted a meta-analysis identifying nearly 400 studies on the prediction of criminal behavior, generating 1,734 individual correlations between a predictor and outcome. Only 46 of the correlations were based upon female offenders samples. Unfortunately, without accurate assessment of those factors that relate to female recidivists, resource allocation and treatment plans may be ineffective. Currently, there is a paucity of services available to women offenders, partly because of their low numbers and partly due to lack of research regarding their needs (Bonta, Pang and Wallace-Capretta 1995). Ultimately, two issues need to be addressed regarding female recidivism: first, what factors contribute to recidivism for women, and second, can risk-assessment instruments that have been constructed on male offenders be applied to female offenders.

One early study of female recidivism was conducted by Lambert and Madden (1976) on 338 women in the Vanier Centre for Women, the only correctional center for adult female offenders in Ontario. Personal interviews were conducted to obtain information of personal and family background, attitudes and criminal history. A subsample of 179 women was selected for follow-up one year after their return to the community. The study found that many pre-institutional variables were related to recidivism. "These offer some basis for dividing women into 'high' and 'low' risk groups for classification and treatment" (Lambert and Madden 1976:321). The variables

include prior criminality, particularly as a juvenile; early family problems such as instability, criminality, and drug or alcohol abuse; serious personal problems such as drug or alcohol dependency, and unstable history of employment. Additionally, Native American women were more likely to recidivate than non-Native American. This finding was also seen by Belcourt, Nouwens, Lefebvre (1992:3) who noted in their study that "while native women made up only about 14 percent of the study sample, they made up about 27 percent of the recidivists." Post-institutional factors that related to recidivism included financial and employment situation, family relationships and residential circumstances. Of particular importance to post-institutional success were employment success and family ties.

In contrast to this earlier study, Alexander and Nickerson (1993) found only four variables in their study to be related to recidivism. Zero order correlations for recidivism and twenty-two variables showed that only age, type of crime, degree of church participation, and prior drug or alcohol history were related to recidivism. They did note, however, that there were other important correlations. For example, childhood and adult sexual and physical abuse was found to be related to mental health issues, including suicide attempts. These issues could certainly contribute to post-corrections adjustment problems.

Other studies conducted by researchers in Canada found several common factors relating to male and female offenders as well as some differences. Loucks and Zamble (1999) found that both male and female offenders had disadvantaged social backgrounds, limited employment skills and histories of repeated anti-social acts. On the other hand, female offenders exhibited significantly higher rates of severe depression and of suicide

attempts. Female offenders were half as likely as male offenders to have an alcohol abuse problem but were twice as likely to have a drug abuse problem. However, in the predictive portion of their study regarding recidivism, the authors found that “there are considerable similarities in the factors predicting recidivism in serious offenders, regardless of gender. Although there are differences in the overall rates of occurrence of some important life experiences, these differences between gender do not seem to be predictive of criminal behavior” (Loucks and Zamble 1999:7). For example, they found high levels of sexual and physical abuse in their sample, but concluded that these factors did not appear to be related to recidivism. Blanchette (1997:2) found that “a history of attempted suicide was the strongest predictor of violent recidivism in a sample of federally sentenced women and that there were much higher rates of self-injury in women recidivists than non-recidivists.” Additionally, she found that the majority of federally sentenced women had some type of substance abuse problem, and showed significant education/employment and family problems. “Fortunately, these reflect needs that are criminogenic and are amenable to intervention” (Blanchette 1997:3).

There are very few studies available that specifically test the predictive accuracy of risk-assessment instruments on women. One study conducted by Peter Hoffman (1982) using the Salient Factor Score did include a sample of women for analysis. The entire sample of cases consisted of 3982 offenders, of which 193 were females. Noting the limitation based on the small sample size, it was concluded that based on the SFS, there was no substantial difference between male and female released federal prisoners in recidivism rate. One could argue, of course, that this simply means that the SFS, as a risk assessment instrument, functions as poorly or as adequately for women as for men.

Bonta, Pang, and Wallace-Capretta (1995) conducted a study testing the predictive validity of the SIR Scale on women. Using an initial sample of 94 female federal inmates, SIR scores were calculated retrospectively from case file information. Because post-release information was unavailable for 13 women, the final sample was 81. Additionally, for two of the items on the scale, number of dependents and employment, there was insufficient information to calculate scores. The total SIR score was found to be mildly but significantly correlated with outcome ($r = .25$, $p > .05$), but that the increases in recidivism did not follow orderly steps from the poor risk to very good risk categories. In fact, the good risk category had the highest rate of recidivism. Particularly problematic was the low numbers for each of the groups. A second study attempted to explore the predictive validity of the two items that were excluded from the previous study. Here, a sample of 173 federally sentenced women was surveyed. It was found that age and criminal history were related to recidivism, but not type of offense. Having children was not related to recidivism, although single-parent mothers showed significantly higher recidivism rates than mothers who reported a partner. None of the employment variables predicted recidivism, but having nonemployment sources of financial support was related to outcome. Not unexpectedly, women who reported having illegal sources of income showed higher recidivism rates than those who did not. Finally, women who depended on welfare were also at higher risk for reoffending. Based on the information provided by the two studies, the authors conclude that the SIR scale may not be particularly useful as a classification instrument for Canadian federally sentenced women, but note that perhaps if the sample sizes been larger, the result would have been different.

The only study found that appeared to not suffer from analysis problems such as sample size tested the predictive utility of the LSI for incarcerated female offenders (Coulson et al. 1996). 526 subjects were followed for one year after being discharged from a medium security institution. Of these, 301 women were also available two years post-release. The predictor measure was the total LSI score. Three measures of failure were used: being charged with or found guilty of one or more charges, parole failure/parole revocation, or halfway house failure. "The point-biserial correlations between LSI and outcome were .51 for recidivism, .53 for parole failure, and .45 for halfway house failure. All were significant ($p < .01$) and indicated that LSI scores accounted for 26.3 percent of the variance for recidivism, 27.9 percent of the variance for parole failure, and 20.2 percent of the variance for halfway house failure" (Coulson et al. 1996:433-434). The two-year data continued to show predictive validity of the LSI, showing a higher probability of recidivism in the high-risk group than in the low-risk group. It should be noted that a different cutoff score was used for women (12 instead of 14 used for men) dividing the low risk offenders (12 or less) from the high-risk offenders (above 12). This was done because the average LSI score for female offenders was lower (15.5) than the average for males (20.9 to 25). "Possible explanations for this difference include differences between male and female criminality, differences in sentencing male and females, or procedural differences in the administration of the LSI" (Coulson et al. 1996:436). Overall, the use of the LSI appears to have predictive validity for female offenders, particularly in determining security placement needs. "The LSI could be useful in alleviating prison overcrowding with little risk to the public. The current sample contained 138 first offenders scoring less than 13 on the LSI. With a recidivism

probability of .08, it is unlikely that this group would have benefited from prison or placement in a halfway house. Considerable savings could be realized by assigning low-risk first offenders to community supervision very early in their sentences" (Coulson et al. 1996:437). Unfortunately, what was not noted in this study was the issue of needs. The LSI is purported to be a risk/needs assessment instrument, and has been found to be useful in identifying the needs of male offenders through the subcomponents. The subcomponents are what provide direction for treatment by identifying those factors that can be changed. This study of female offenders confirms the LSI's predictive validity but does not address how well it could identify the criminogenic needs of women.

SUMMARY AND CONCLUSIONS

While this review is not designed to be an exhaustive summary of risk assessment instruments, it is intended to hopefully address the salient points regarding prediction and classification, and to touch on some of the more commonly used instruments. There are numerous scales being used by different agencies trying to assess different elements. For example, there is the Oregon Parole Prognosis Scale, the Pennsylvania Assessment Scale; there are chemical dependency scales and domestic violence inventories. Regardless of what scale is being used, they need to be guided by the following principles (Clear 1992): (1) Classification must take into account the organizational context. Classification systems created for one setting do not necessarily apply to another. (2) Risk classifications should be validated on the populations to which they will be applied. (3) Classifications should include criminogenic needs and lead to programs designed to alter those factors. (4) The statistical and methodological techniques used may be important considerations and their appropriateness needs to be assessed based on the target population. (5) Training and monitoring are essential to good classification practice.

There is still a significant amount of research that needs to be conducted regarding risk-assessment instruments. For example, while some studies noted an overrepresentation of Native American offenders among recidivists, I was able to find only one study actually testing a scale's predictive ability on another ethnic group. Bonta, LaPrairie, and Wallace-Capretta (1997) studied risk prediction on aboriginal and non-aboriginal offenders using the Manitoba Risk-Needs Scale and found there to be some differences. Furthermore, within the aboriginal groups there were differences, such as between those who are "treaty-on" and "treaty-off." Overall, though, based on this

one study, their findings were that most of the risk factors were similar for aboriginal and non-aboriginal offenders. Further study would be called for regarding the validity of any of these scales on groups of different culture or race. Certainly, there needs to be more research done on risk assessment of female offenders. Another area that has received no attention regarding risk assessment is that of offenders from rural areas. There is very little research on rural criminality. The study conducted on Colorado using the LSI did include one rural community corrections center, but the researchers combined the information obtained from the different centers, therefore one would not have been able to tell if there were any notable differences in the rural center. While it may be the case that the predictive validity of these instruments may be no different in a rural setting than an urban one, the lack of such information should be of concern for any agency that is considering adopting a particular instrument for offenders of a rural community.

In some instances, agencies may be able to alter existing instruments to fit the needs of the population they are serving. There are now several different versions of the LSI available. For example, the LSI-YO is designed to assess risk in young offenders. While many of the scale items are similar to the original scale, other items address issues relevant to young offenders, such as school performance and peer issues. There is also the LSI-OR, the Ontario revised version, that increased the number of risk levels from three (low, medium, and high) to five, by subdividing the low into low and very low and the high into high and very high. "An accurate scheme with few levels of risk classification essentially gives up some of its important predictive validity. Therefore, a five-level system of risk was used so the decision-maker or case manager would be working with a more precise, and consequently, more accurate, system of offender

classification” (Wormith 1997:3). Other changes in the LSI include the development of a self-report inventory (Motiuk, Motiuk and Bonta 1992). It was found to be as effective as the standard interview-based classification instrument, and actually performed better on the attitude/orientation subcomponent, although the authors cautioned that the sample size was too small to be very conclusive ($n = 97$). Furthermore, some of the loss in their sample was due to the fact that the self-report inventory required a certain level of literacy, which may be problematic with offender populations.

It appears as though the area of risk assessment is still developing. Compared to other aspects of criminal justice policy, risk/needs classification is still a young field. Researchers caution that agencies may not necessarily see great reductions in recidivism rates simply as a result of the use risk prediction instruments in case management. “Case management models should be evaluated in relationship to their utility and not necessarily in relationship to a reduction in criminal activity. The systems work if officers make better decisions on cases, make more appropriate referrals to community service agencies, are more efficient in their work....” (Kratcoski 1985:56). Instruments are still being fined-tuned, others are currently being developed, and there are still many areas where there just simply has not been enough research to place confidence in what is available. But continuing what has been started can only benefit our communities. “If the accuracy of predictions can be significantly improved, we may be able to target resources on dangerous offenders, to extend greater leniency to nondangerous offenders, to reduce prison populations, and thereby achieve greater crime control at less financial cost. Thus the public’s interests in crime control and economy will be served, sentencing (or bail release or parole release) disparities will be diminished, an offenders will suffer

punishments that are not undeserved. It is not the best of all possible worlds, but it is better than what now exists" (Tonry 1987:388).

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APPENDIX A

SALIENT FACTOR SCORE SHEET

Case Name	Register Number
Item A	<input type="checkbox"/>
No prior convictions (adult or juvenile) = 2	
One or two prior convictions = 1	
Three or more prior convictions = 0	
Item B	<input type="checkbox"/>
No prior incarcerations (adult or juvenile) = 2	
One or two prior incarcerations = 1	
Three or more prior incarcerations = 0	
Item C	<input type="checkbox"/>
Age at first commitment (adult or juvenile): 18 years or older = 1	
Otherwise = 0	
Item D	<input type="checkbox"/>
Commitment offense did not involve auto theft = 1	
Otherwise = 0	
Item E	<input type="checkbox"/>
Never had parole revoked or been committed for a new offense while on parole = 1	
Otherwise = 0	
Item F	<input type="checkbox"/>
No history of heroin, cocaine, or barbiturate dependence = 1	
Otherwise = 0	
Item G	<input type="checkbox"/>
Has completed 12th grade or received GED = 1	
Otherwise = 0	
Item H	<input type="checkbox"/>
Verified employment (or full-time school attendance) for a total of at least 6 months during the last 2 years in the community = 1	
Otherwise = 0	
Item I	<input type="checkbox"/>
Release plan to live with spouse and/or children = 1	
Otherwise = 0	
TOTAL SCORE	<input type="checkbox"/>

APPENDIX B

Department of Health and Social Services
Division of Corrections
Form C-502 (Rev. 1/79)

ASSESSMENT OF CLIENT RISK

Client Name	Last	First	MI	Client Number
Probation Control Date or Institution Release Date (Month, Day, Year)		Agent Last Name		Number

Select the appropriate answer and enter the associated weight in the score column. Total all scores to arrive at the risk

		SCORE
Number of Address Changes in Last 12 Months: (Prior to incarceration for parolees)	0 None 2 One 3 Two or more	_____
Percentage of Time Employed in Last 12 Months: (Prior to incarceration for parolees)	0 60% or more 1 40% - 59% 2 Under 40% 0 Not applicable	_____
Alcohol Usage Problems: (Prior to incarceration for parolees)	0 No interference with functioning 2 Occasional abuse; some disruption of functioning 4 Frequent abuse; serious disruption; needs treatment	_____
Other Drug Usage Problems: (Prior to incarceration for parolees)	0 No interference with functioning 1 Occasional abuse; some disruption of functioning 2 Frequent abuse; serious disruption; needs treatment	_____
Attitude:	0 Motivated to change; receptive to assistance 3 Dependent or unwilling to accept responsibility 5 Rationalizes behavior; negative; not motivated to change	_____
Age at First Conviction: (or Juvenile Adjudication)	0 24 or older 2 20 - 23 4 19 or younger	_____
Number of Prior Periods of Probation/Parole Supervision: (Adult or Juvenile)	0 None 4 One or more	_____
Number of Prior Probation/Parole Revocations: (Adult or Juvenile)	0 None 4 One or more	_____
Number of Prior Felony Convictions: (or Juvenile Adjudications)	0 None 2 One 4 Two or more	_____
Convictions or Juvenile Adjudications for (Select applicable and add for score. Do not exceed a total of 5. Include current offense.)	2 Burglary, theft, auto theft, or robbery 3 Worthless checks or forgery	_____
Conviction or Juvenile Adjudication for Aggravated Offense within Last Five Years: (An offense which involves the use of a weapon, physical force or the threat of force)	1 Yes 0 No	_____

REASSESSMENT OF CLIENT RISK

SELECT THE APPROPRIATE ANSWER AND ENTER THE ASSOCIATED
WEIGHT IN THE SCORE COLUMN. TOTAL ALL SCORES TO ARRIVE AT
THE RISK ASSESSMENT SCORE.

	SCORE
NUMBER OF ADDRESS CHANGES IN LAST 12 MONTHS:	0 NONE 2 ONE 3 TWO OR MORE _____
AGE AT FIRST CONVICTION: (OR JUVENILE ADJUDICATION)	0 24 OR OLDER 1 20 - 23 2 19 OR YOUNGER _____
NUMBER OF PROBATION/PAROLE REVOCATIONS: (ADULT OR JUVENILE)	0 NONE 2 ONE OR MORE _____
NUMBER OF PRIOR FELONY CONVICTIONS: (OR JUVENILE ADJUDICATIONS)	0 NONE 1 ONE 3 TWO OR MORE _____
CONVICTIONS OR JUVENILE ADJUDICATIONS FOR: (SELECT ALL APPLICABLE AND ADD FOR SCORE)	1 BURGLARY 1 THEFT 1 AUTO THEFT 1 ROBBERY 2 WORTHLESS CHECKS 2 FORGERY _____
RATE THE FOLLOWING BASED ON PERIOD SINCE LAST CLASSIFICATION:	
PERCENTAGE OF TIME EMPLOYED:	0 60% OR MORE 1 40% - 59% 2 UNDER 40% 0 NOT APPLICABLE _____
ALCOHOL USAGE/PROBLEMS:	0 NO APPARENT PROBLEMS 2 MODERATE PROBLEMS 5 SERIOUS PROBLEMS _____
OTHER DRUG USAGE/PROBLEMS:	0 NO APPARENT PROBLEMS 1 MODERATE PROBLEMS 3 SERIOUS PROBLEMS _____
PROBLEMS IN INTER-PERSONAL RELATIONSHIPS: (CURRENT LIVING SITUATION)	0 NONE 1 FEW 3 MODERATE 5 SEVERE _____
SOCIAL IDENTIFICATION:	0 MAINLY WITH POSITIVE INDIVIDUALS 3 MAINLY WITH DELINQUENT INDIVIDUALS _____
RESPONSE TO COURT OR BUREAU IMPOSED CONDITIONS:	0 NO PROBLEMS OF CONSEQUENCE 3 MODERATE COMPLIANCE PROBLEMS 5 HAS BEEN UNWILLING TO COMPLY _____
USE OF COMMUNITY RESOURCES:	0 NOT NEEDED 0 PRODUCTIVELY UTILIZED 2 NEEDED BUT NOT AVAILABLE 3 UTILIZED BUT NOT BENEFICIAL 4 AVAILABLE BUT REJECTED _____
TOTAL SCORE _____	

ASSESSMENT OF CLIENT NEEDS

Client Name	Last	First	MI	Client Number
Probation Control Date or Institution Release Date (Month, Day, Year)				Agent Last Name
				Number

Select the appropriate answer and enter the associated weight in the score column. Higher numbers indicate more severe problem client is to be referred to a community resource or to clinical services, check appropriate referral box.

ACADEMIC/VOCATIONAL SKILLS

-1 High school or above skill level

0 Adequate skills able to handle every day requirements

+2 Low skill level causing minor adjustment problems

+4 Minimal skill level causing serious adjustment problems

EMPLOYMENT

Satisfactory employment -1 more than one year no longer

0 Secure employment, no difficulties reported, or nonworker, student or retired

+3 Unsatisfactory employment, or unemployed but has adequate job skills

+6 Unemployed and virtually unemployable, needs training

FINANCIAL MANAGEMENT

Long standing pattern -1 of self sufficiency, e.g., good credit rating

0 No current difficulties

+3 Situational or minor difficulties

+5 Severe difficulties: may include garnishment, bad checks or bankruptcy

MARITAL/FAMILY RELATIONSHIPS

Relationships and -1 support exceptionally strong

0 Fairly stable relationships

+3 Some disorganization or stress but potential for improvement

+5 Major disorganization or stress

COMPANIONS

-1 Client positive and influence

0 Fairly stable relationships

+2 Associations with occasional negative results

+4 Associations almost completely negative

EMOTIONAL STABILITY

Exceptionally well -2 adjusted; accepts responsibility for actions

3 A few symptoms of emotional difficulty appropriate emotional responses

+4 Symptoms but do not present adequate functioning, e.g., excessive anxiety

+7 Symptoms probably adequate functioning, e.g., takes out or retreats into self

ALCOHOL USAGE

0 No interference with functioning

+3 Occasional abuse; some disruption of functioning

+6 Frequent abuse; serious disruption; needs treatment

OTHER DRUG USAGE

0 No interference with functioning

+3 Occasional substance abuse; some disruption of functioning

+5 Frequent substance abuse; serious disruption; needs treatment

MENTAL ABILITY

0 Able to function independently

+3 Some need for assistance, potential for adequate adjustment and rehabilitation

+6 Inabilities severely limit independent functioning, moderate rehabilitation

HEALTH

0 Good physical health; no problems

+1 Moderate illness interferes with functioning on a continuing basis

+2 Serious handicap or chronic illness; needs frequent medical care

SEXUAL BEHAVIOR

0 No apparent problems

+3 Past or present sexual or related problems

+5 Past or present sexual or related problems

AGENT'S IMPRESSION OF CLIENT'S NEEDS

Minimum

0 Low

+3 Medium

+5 High

APPENDIX C

Level of Supervision Inventory Criminal History

No	Yes	1. Any prior adult convictions? Number: _____
No	Yes	2. Two or more prior convictions?
No	Yes	3. Three or more prior conviction?
No	Yes	4. Three or more present offenses? Number: _____
No	Yes	5. Arrested under age 16?
No	Yes	6. Ever incarcerated upon conviction?
No	Yes	7. Escape history from a correctional facility?
No	Yes	8. Ever punished for institutional misconduct? Number: _____
No	Yes	9. Charge laid or probation/parole suspended during prior community supervision?
No	Yes	10. Official record of assault/violence?

Education/Employment

When in labor market:

No	Yes	11. Currently unemployed?
No	Yes	12. Frequently unemployed?
No	Yes	13. Never employed for a full year?
No	Yes	14. Ever fired?

School or when in school:

No	Yes	15. Less than regular grade 10?
No	Yes	16. Less than regular grade 12?
No	Yes	17. Suspended or expelled at least once?

For the next three questions, if the offender is a homemaker or pensioner, complete #18 only. If the offender is in school, working, or unemployed, complete #18, #19, and #20. If the offender is unemployed, rate 0.

3	2	1	0	18. Participation/performance
3	2	1	0	19. Peer interactions
3	2	1	0	20. Authority interactions

Alcohol/Drug Problems

Alcohol problem, ever	No	Yes	37.		
Drug problem, ever	No	Yes	38.		
Alcohol problem, currently	3	2	1	0	39.
Drug Problem, currently	Specify type of drug:				40.
_____	3	2	1	0	
Law violations	No	Yes	41.		
Marital/Family	No	Yes	42.		
School/Work	No	Yes	43.		
Medical	No	Yes	44.		
Other indicators	Specify: _____				45.
	No	Yes			

Emotional/Personal

Moderate interference	No	Yes	46.
Severe interference, active psychosis	No	Yes	47.
Mental health treatment, past	No	Yes	48.
Mental health, present	No	Yes	49.
Psychological assessment indicated	Area:		
	No	Yes	50.

Attitudes/Orientation

Supportive of crime	3	2	1	0	51.
Unfavorable toward convention	3	2	1	0	52.
Poor, toward sentence	No	Yes			53.
Poor, toward supervision	No	Yes			54.

Financial

3	2	1	0	21. Problems	
No	Yes			22. Reliance upon social assistance	

Family/Marital

Dissatisfaction with marital or equivalent situation	3	2	1	0	23.
Non-rewarding, parental	3	2	1	0	24.
Non-rewarding, other relatives	3	2	1	0	25.
Criminal-Family/Spouse	3	2	1	0	26.

Accommodation

Unsatisfactory	3	2	1	0	27.
3 or more address changes last year	No	Yes			28.
High crime neighborhood	No	Yes			29.

Leisure/Recreation

Absence of recent participation in an organized activity	No	Yes			30.
Could make better use of time	3	2	1	0	31.

Companions

A social isolate	No	Yes			32.
Some criminal acquaintances	No	Yes			33.
Some criminal friends	No	Yes			34.
Absence of anti-criminal acquaintances	No	Yes			35.
Absence of anti-criminal friends	No	Yes			36.